May 26, 1959 F. G. HODGES, JR 2,887,693

MATTRESS OR CUSHION UNIT

Filed Aug. 24, 1954

Fig. 1.

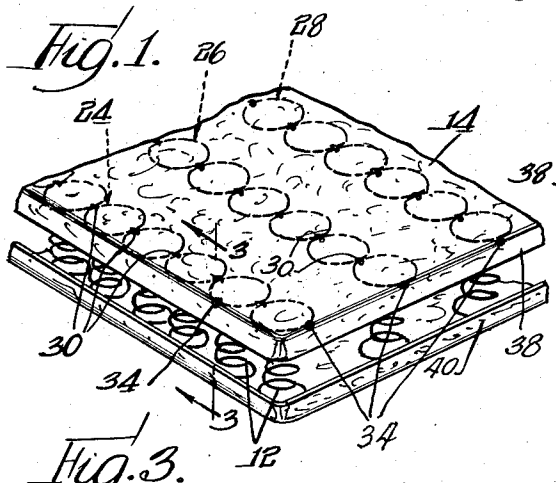


Fig. 2.

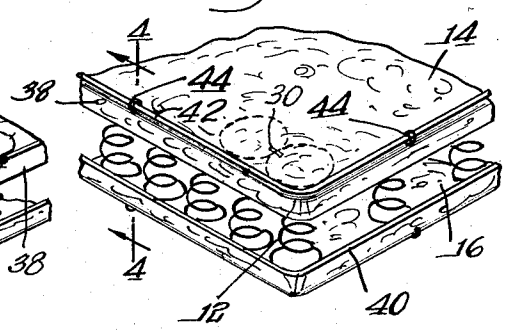


Fig. 3.

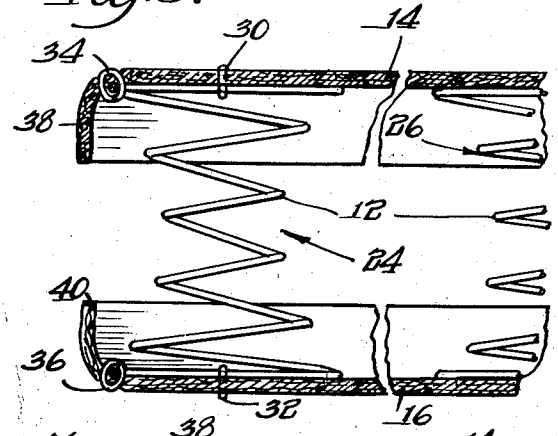


Fig. 4.

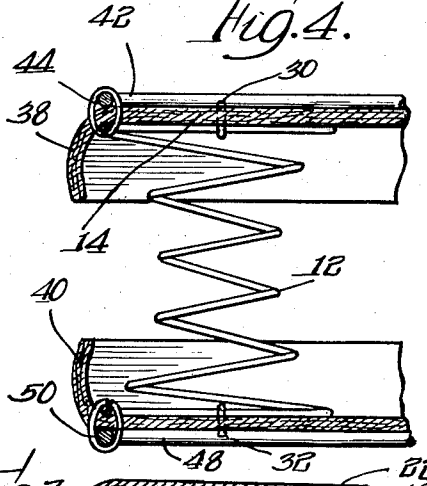


Fig. 5.

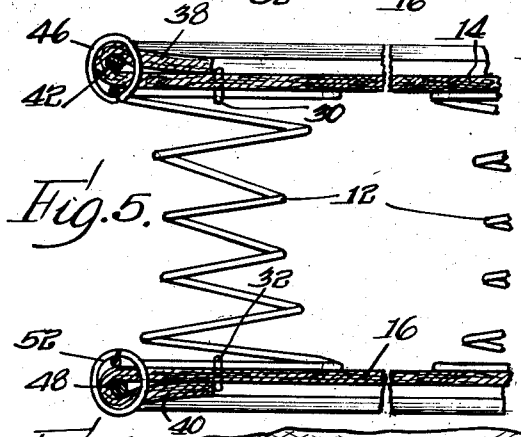


Fig. 6.

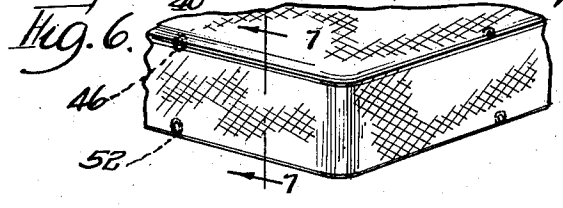
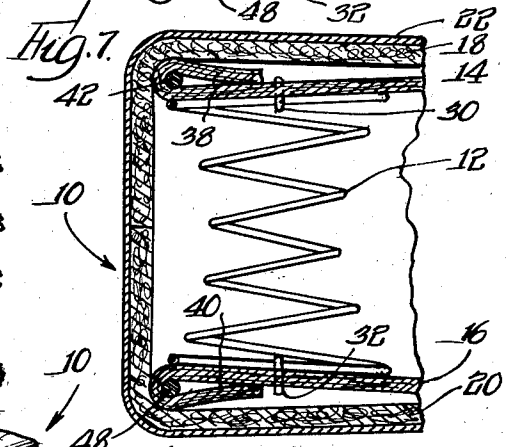


Fig. 7.



INVENTOR.

Frederick G. Hodges Jr.

BY

Olson & Trexler

Attys.

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MATTRESS OR CUSHION UNIT

Frederick G. Hodges, Jr., Lake Worth, Fla.

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5 Claims. (Cl. 5—351)

The present invention relates to a novel mattress structure, and more particularly, to a novel coil spring type mattress structure.

As is well known, mattresses are made in different grades of quality to be sold at various prices. The relatively inexpensive mattresses are made with fewer springs than higher quality mattresses. While such inexpensive mattresses are satisfactory in many respect, they often tend to sag unduly, especially at their edges; and their edges are usually thinner than their mid-portion so that a person resting on an edge portion of the mattress is not properly supported. Also, such inexpensive mattresses having a thin appearance are uninviting to a prospective purchaser and often prevents the sale of an otherwise satisfactory product.

It is a primary object of the present invention to provide a novel relatively inexpensive mattress structure or the like, which is constructed so as to improve both the appearance and the supporting ability of its marginal portions without materially increasing manufacturing costs.

More specifically, it is an object of the present invention to provide a novel relatively inexpensive mattress structure or the like wherein the edge of the mattress is as thick or thicker than mid-portions thereof so as to improve the appearance thereof and the support provided thereby.

Another more specific object of the present invention is to provide a novel inexpensive mattress structure of the above described type which is constructed so as to increase the stiffness of its margins without materially increasing manufacturing costs and without altering the softness of its mid-portions.

Other objects and advantages of the present invention will become apparent from the following description and the accompanying drawings wherein:

Fig. 1 is a fragmentary perspective view of a partially constructed mattress or the like, embodying the features of the present invention;

Fig. 2 is a fragmentary perspective view similar to Fig. 1, but showing, in addition, a border wire secured in position to further complete the mattress;

Fig. 3 is an enlarged vertical sectional view taken along line 3—3 in Fig. 1;

Fig. 4 is an enlarged vertical sectional view taken along line 4—4 in Fig. 2;

Fig. 5 is a fragmentary sectional view similar to Fig. 4 but showing the mattress in a further completed state;

Fig. 6 is a fragmentary perspective view of a completed mattress or the like, embodying the principles of this invention; and

Fig. 7 is an enlarged sectional view taken along line 7—7 in Fig. 6.

Referring now more specifically to the drawings wherein like parts are designated by the same numerals throughout the various figures, a completed mattress structure 10 or the like, is shown in Figs. 6 and 7. The mattress 10 includes a plurality of coil springs 12, paddings 14 and 16 of sisal or the like, covering opposite ends of the springs, paddings 18 and 20 of cotton felt or the like, covering the sisal pads and ticking 22 of any suitable material covering the entire assembly.

As shown in Fig. 1, the springs 12 are arranged in a a plurality of rows 24, 26 and 28 with the springs in each row adjacent each other. It is understood that only a portion of the mattress is shown in Fig. 1 and the mattress includes additional rows of springs to provide it with the desired width. While the rows of springs are shown spaced from each other, they may be placed in abutting relationship.

In order to effect substantial savings in material and labor costs over conventional mattress structures, all springs, wires or similar connections used in conventional mattresses between the rows of springs 12 are eliminated and the springs 12 are connected directely to the sisal pads 14 and 16 by staples or hog rings 30 and 32. It should be noted that the staples 30 and 32 also serve to connect adjacent springs in each row together. With this structure it is seen that the sisal pads not only serve to cover the springs but also serve to retain the springs in predetermined assembled relationship. The manner in which the sisal pads and the spring may be assembled and secured together is fully set forth in my Patent 2,382,226, dated August 14, 1945, and need not be repeated here.

In accordance with the present invention, the outer portions of several of the border springs 12 along each edge of the mattress may be secured to the sisal pads 14 and 16 by staples 34 and 36 if desired, and the pads are respectively provided with marginal portions 38 and 40 which extend outwardly of the staples 34 and 36. It is understood that all four edges of each sisal pad are provided with an outwardly extending marginal portion. A prefabricated rectangular border wire 42 of known construction is positioned on the sisal pad 14 and, if desired, may be secured in place by means of a plurality of staples 44 each of which extends around the wire and an end coil of one of the border springs. However, in many cases, the staples 34, 36 and 44 may be omiited. The marginal portion 38 at each edge of the pad 14 is folded upwardly and wrapped or directed over the border wire 42 and secured in place by a plurality of spaced staples 46 as shown in Figs. 5 and 6. The staples 46 are spaced along all four margins of the mattress and are made large enough so that they extend through the double layer of the sisal pal and around an end coil of one of the springs 12. A border wire 48 is also placed against the sisal 16 and secured by means of a plurality of staples 50. The marginal portions 40 of the pad 16 are then folded back over the four sides of the rectangular border wire and secured with a plurality of staples 52 identical to the staples 46. After the border wires and the marginal portions of the sisal pads have been positioned and secured in the manner just described, the felt pads 18 and 20 and the ticking 22 may be applied to the mattress structure in any known manner.

From the above description, it is seen that each sisal pad is provided with a double thickness at its margins with the border wires disposed between the folded portions of the pads. As a result, the margins of the mattress are provided with greater body or stiffness without interfering with the softness or flexibility of the remainder of the mattress. Furthermore, the double layer marginal portions of the sisal pads increase the thickness of the mattress edges so as to reduce or eliminate any sag at the mattress edges and provide squared and more appealing appearance. The sisal pads are usually made with a thickness of about ⅜ of an inch so that by doubling over the margins of both pads, the thickness of the mattress edge is increased about ¾ of an inch. An-

other advantage of the described structure is that the border wires may be applied to the outer surfaces of the sisal pads in order to facilitate economical assembly of the pads, coil springs and wires, while at the same time, marginal portions of the sisal pads overlie the border wires to prevent the wires from working through the felt pads and to eliminate "feel through" of the wires.

While the preferred embodiment of the present invention has been shown and described herein, it is obvious that many structural details may be changed without departing from the spirit and scope of the appended claims.

The invention is claimed as follows:

1. In a mattress structure and the like, a plurality of rows of spring units, pad means overlying said spring units, border wire means disposed against an outer surface of said pad means and extending along marginal borders thereof, and a plurality of separate securing means extending through said pad means and respectively connecting the said pad means to a spring unit adjacent the securing means and serving with the pad means to interconnect adjacent spring units of each row for retaining the same in assembled relation with said pad means.

2. In a mattress structure as claimed in claim 1, wherein additional securing means are provided for securing the border wire means with the pad means and spring units.

3. In a mattress structure as claimed in claim 2, wherein the pad means has doubled back marginal portions extending over said border wire means to reduce "feel through" of the border wire means.

4. In a mattress structure as claimed in claim 3, wherein said additional securing means also secures the doubled back portions of the pad means.

5. In a mattress structure as claimed in claim 1, wherein the rows of spring units are spaced from one another and wherein additional securing elements connect the spring units along the margins of said pad means to the said pad means.

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